

Title (en)  
Stereo matching method and disparity measuring method

Title (de)  
Verfahren zur Stereoübereinstimmungs- und Ungleichheitsmessung

Title (fr)  
Méthode concordance et mesure de disparité stéréo

Publication  
**EP 0738872 A2 19961023 (EN)**

Application  
**EP 96302562 A 19960411**

Priority  
JP 9720495 A 19950421

Abstract (en)  
In the image pickup phase (A), right and left images are taken in through two image-pickup devices (S101, S102). Then, in the next feature extraction phase (B), right and left images are respectively subjected to feature extraction (S103, S104). Thereafter, in the succeeding matching phase (C), the extracted features of right and left images are compared to check how they match with each other (step S105). More specifically, in the matching phase (C), a one-dimensional window is set, this one-dimensional window is shifted along the left image in accordance with a predetermined scanning rule so as to successively set overlapped one-dimensional windows, and a matching operation is performed by comparing the image features within one window and corresponding image features on the right image. Subsequently, in the disparity determination phase (D), the left image is dissected or divided into plural blocks each having a predetermined size, a histogram in each block is created from disparities obtained by the matching operation based on one-dimensional windows involving pixels of a concerned block, and a specific disparity just corresponding to the peak of thus obtained histogram is identified as a valid disparity representing the concerned block (S106). <IMAGE>

IPC 1-7  
**G01C 11/06**; **G06T 7/00**

IPC 8 full level  
**H04N 13/02** (2006.01); **G01C 11/06** (2006.01); **G06T 7/00** (2006.01); **G06V 10/10** (2022.01); **G06V 10/24** (2022.01); **H04N 13/00** (2006.01)

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**H04N 13/239** (2018.04 - EP US); **H04N 2013/0081** (2013.01 - EP US)

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